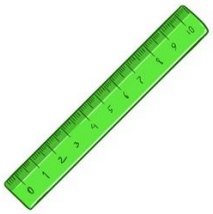
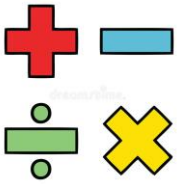


Blue Area

Maths

Definitions of words and phrases



Acute angle	An **angle** of less than 90°.
Addition	Finding the total value of two or more numbers. Denoted by the symbol '+'.
Analogue clock	A clock which tells the time using an hour hand to indicate the hour and a minute hand to indicate minutes to and past the hour.
Angle	The space between two intersecting lines, measured in **degrees**.
Area	The amount of space taken up by a 2D shape. Measured in square centimetres, metres etc. Also shown as cm^2, m^2 and so on.
Arithmetic	Maths which deals with the properties of numbers and how to manipulate numbers using the four **operations**.
Array	A pictorial representation to help children understand multiplication and division. Typically shown as rows of dots, for example, 2 x 3 would be shown as two rows of three dots.
Axes	The **horizontal** and **vertical** lines used to frame a **graph** or **chart.**
Bar chart	A chart that displays information using blocks of different heights displayed on **axes**.
Block graph	A simple **chart** which displays information using blocks, displayed on a **horizontal axis** labelled with categories, and a **vertical axis** labelled with numbers. Each block represents one unit.
Bridging through 10	A mental method of adding two numbers whose total is greater than 10. Pupils are taught to count on to 10 and then add the remainder of the number to 10. For example: 7 + 9 - bridging from 7 to 10 requires 3, which leaves 6 (from the original 9), 10 + 6 = 16.
Bus stop method	Also known as 'short division'. This is a division technique taught once children are confident with the '**chunking**' method of division.
Calculation	Working out the amount or number of something, usually by using one of the four **operations.**
Capacity	The term used when measuring how much fluid fits inside a container. Measured in millilitres and litres.
Clockwise and anti-clockwise	A way of indicating the direction of a turn. Clockwise involves a turn to the right as if following the hands of a clock, anti-clockwise involves a turn to the left, against the direction of a clock's hands.
Coordinates	The numbers which show the position of a particular point in space - for example on a map or a graph. The points are marked according to numbers of the **horizontal axis** (x-axis) and **vertical axis** (y-axis).
Column method	A method of **calculation** where the numbers to be added or subtracted are set out above one another in columns. The calculation is done by 'carrying' and 'borrowing' numbers from column to column.
Commutativity	Addition and multiplication have the property of commutativity - when two numbers are added or multiplied, this can be done in any order and the same answer will be obtained: 3 + 2 = 5, 2 + 3 = 5; 4 x 6 = 24, 6 x 4 = 24. Subtraction and division are not commutative.

Cone	A **3D shape** with two **faces**, one circular, one **edge** and one **vertex.**
Converting into the same units	Understanding the connection between units of measurement and how they can be converted one to another. For example, length can be measured in centimetres or metres; there are 100cm in a metre.
Corner	Also known as a **vertex**. The place on a **3D** shape where three **faces** meet. Also used to describe the angles of a **2D shape**.
Cube	A **3D shape** with six square **faces**, 12 **edges** and eight **vertices**.
Cuboid	A **3D shape** with six **faces**, some or all of which are rectangular, 12 **edges** and eight **vertices**.
Cylinder	A **3D shape** with two circular **faces**, one rectangular **face**, two **edges** and no vertices.
Data handling	Now known as **Statistics**. The area of maths which looks at representation and analysis of information through charts and graphs.
Decimal	A decimal number is expressed in the scale of tens. More simply, numbers are referred to as decimal if they contain a decimal point and represent a whole number plus a fraction of a whole number (tenths, hundredths, etc.)
Degree	The unit of measurement for angles and also for temperature. Represented by the symbol ° for angles (e.g. 90°) or °C (degrees Centigrade) and °F (degrees Fahrenheit) for temperature.
Denominator	In a **fraction**, the number below the line.
Diagonal	A straight line that joins two **vertices** of a shape that are not next to each other.
Diameter	A straight line that joins two points on the **circumference** of a **circle** and passes through the centre.
Dienes	Wooden or plastic cubes, rods and flats used to support children in learning place value. Each small cube represents one unit, a rod represents 10, a flat represents 100 and a large cube represents 1000.
Digital clock	A clock which tells the time using numbers only.
Division	The process of dividing a number up into equal parts, and finding how many equal parts can be made and whether there is a **remainder**. It is represented by the symbol '÷' or sometimes '/'.
Division fact	A division **number sentence** related to the **times tables**. For example, the division fact 16 ÷ 4 = 4 is related to the 4x table.
Divisor	The number of groups that a number is to be divided into as part of a division calculation e.g. in the calculation 10 ÷ 5 the divisor is 5.
Edge	The place on a 3D shape where two **faces** meet.

Equilateral triangle	A **triangle** with three equal sides and three equal angles.
Equivalent fractions	Fractions which represent the same amount but are expressed using different numbers. For example $^{1}/_{3}$ is the same as $^{2}/_{6}$ and $^{4}/_{12}$.
Estimate	Sometimes called an 'educated guess'. Estimating is roughly guessing a number of objects or the answer to a calculation based on existing knowledge.
Even numbers	All numbers that are exactly divisible by 2. Even numbers always end with 0, 2, 4, 6 or 8.
Expanded notation	Writing number sentences where the numbers have been **partitioned**. For example 43 + 26 could be written as 40 + 3 + 20 + 6.
Face	Any flat surface of a **3D shape**. Faces can be flat or curved and of many different shapes.
Factor	A **factor** is one of two or more numbers that divides a given number without a remainder. In the number sentence 4 x 5 = 20, both 5 and 4 are factors of 20.
Fraction	A fraction is a number which represents part of a whole. It can be represented using a **numerator** and **denominator** e.g. $^{1}/_{2}$, or as a **decimal** e.g. 0.5.
Geometry	The study of shape, position and movement. Includes such aspects as **2D and 3D shapes**, **angles, symmetry**, pattern, **tessellation**, turns and position.
Graph	A pictorial way of representing and comparing information. Types taught in primary school include **block graphs, bar charts, pictograms, pie charts** and **line graphs**.
Greater than (>) and less than (<)	Symbols used to show the relative size of numbers. The wide end of the symbol always faces the larger number, e.g. 25 > 10.
Grid method	The **grid method** is a written technique used to teach children multiplication. It involves partitioning numbers into tens and units before they are multiplied, and placing them in a grid. The numbers are then multiplied two by two and the results are added together to give a total answer.
Hexagon	A **2D shape** with six **sides** and six **vertices**.
Highest common factor	The highest common factor of two numbers is the largest whole number which is a **factor** of both.
Horizontal	A horizontal line runs from left to right joining equivalent points on two opposite sides of a shape.
Improper fraction	An improper **fraction** has a higher number on top (the **numerator**) than the bottom (the **denominator**).
Isosceles triangle	A **triangle** with two **sides** the same length and two **angles** the same size.
Jottings	Informal written work done to help to work out the answer to a calculation or a problem.
Mass	This refers to the weight of an object. It is measured in grams (g) and kilograms (kg).

Multiple	A multiple is a number that can be divided by another number a certain number of times without a remainder. In the number sentence 4 x 5 = 20, 20 is a multiple of 4 and a multiple of 5.
Multiplication	Finding how many altogether in a given number of equal sized groups. Represented by the symbol 'x'.
Multiplication fact	The answer to a multiplication calculation. For example in 3 x 3 = 9, the multiplication fact is 9.
Multiplication tables	The multiplication calculations for all numbers from 1 x 2 to 12 x 10. Usually grouped by the number being multiplied. Children begin by learning the 2x, 5x and 10x tables, and the English curriculum requires that multiplication tables and the related division facts are known by heart by the end of Year 6.
Multiplier	The number by which a given quantity is multiplied. So in the calculation 5 x 3 = 15, the multiplier is 5.
Negative number	A number that is less than zero, for example -3, -52.
Net	What a **3D shape** would look like if it was opened out flat.

Obtuse angle	An **angle** greater than 90° but less than 180°.
Odd numbers	All whole numbers which are not exactly divisible by 2. Odd numbers always end in 1, 3, 5, 7 or 9.
Octagon	A **2D shape** with eight **sides** and eight **vertices**.
Operation	The four mathematical operations are **addition**, **subtraction**, **multiplication** and **addition**.
Ordering	Putting numbers in the correct order according to size. Ascending order goes smallest to largest, descending order from largest to smallest. Ordering also involves using the **greater than, less than and equals** symbols (**<, > and =**).
Ordinal numbers	Numbers which indicate order – 1st, 2nd, 3rd and so on.
Parallel	Lines which have exactly the same distance between them for their full length, and will never cross.
Partitioning	See also **recombining**. Partitioning is dividing a number into the individual values of its digits, and helps children to understand the values of these digits. For example 782 can be partitioned into 700 + 80 + 2.
Pentagon	A **2D shape** with 5 **sides** and 5 **vertices**.
Perimeter	The distance all the way around a **2D shape** – the total length of all its sides.
Perpendicular	Lines which intersect at a **right angle** are perpendicular.
Pictogram	A **chart** or **graph** which uses pictures to represent data. They are set out the same way as **bar charts** but use pictures instead of bars. Each picture could represent one item or more than one.
Place value	The value of all the digits in a number. For example, in the number 627, the digit '2' is worth 20, the digit '6' is worth 600.
Right angle	An angle of exactly 90°. The two lines which make a right angle are **perpendicular**.
Right-angled triangle	A triangle with one angle of 90°. Also known as a quarter turn, because it is one quarter of a full turn.
Roman numerals	The numbers that were used in ancient Rome, combinations of letters from the Roman alphabet (I, V, X, L, C, D, M).
Rotation of shapes	The movement of shapes around a fixed point, by a given number of **degrees** and in a certain direction (**clockwise** or **anticlockwise**). The shape itself will remain the same but its position in the space will change.
Scalene triangle	A triangle with thee sides of different lengths and three different angles.
Simplifying fractions	Finding an **equivalent fraction** where the numbers are reduced as much as possible. For example, the fraction $^{16}/_{24}$ in its simplest form would be $^{2}/_{3}$.
Sphere	A **3D shape** with one curved **face**, no **edges** and no **vertices**.
Square	A **2D shape** with four equal **sides**, four **vertices** and four **right angles**.

Unit fractions	A fraction where the **numerator** is 1 and the **denominator** is a whole number.
Venn diagram	A way of sorting information using two or more circles, which may or may not be overlapping.
Vertex/vertices	Also known as **corner/s**. The place on a **3D shape** where three **faces** meet. Also commonly used to describe the corners of a **2D shape**.
Vertical	A line which runs up and down a page or shape, from top to bottom. It will intersect a **horizontal** line at **right angles.**
Volume	The amount of space taken up by an object.
Whole number	A number which contains no fractions or parts of a whole such as decimal numbers.
Word problem	A mathematical calculation presented in words. Pupils are taught to find the key information, work out what type of calculation is needed and then work out the answer.
Working	Written work which supports finding an eventual answer to a calculation or a problem. Important as it shows how a pupil tackled the problem and the skills they used to work out the problem.
Written method	A way of carrying out a calculation which is done on paper rather than entirely mentally.
24 hour clock	The 12 hour clock runs from 1 o'clock to 12 o'clock twice per day. The 24 hour clock runs from 00:00 hours (midnight or 12.00 am) through 24 hours to 23:59 (11.59 pm).
2D shapes	Shapes which are flat, having only two dimensions – height/length and width.
3D shapes	Shapes which have a solid form, having 3 dimensions – height/length, width and depth.